



DOCKET NO.: H0498.70154US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lieber, et al.
Serial No.: 09/935,776
Confirmation No.: 8935
Filed: August 22, 2001
For: DOPED ELONGATED SEMICONDUCTORS, GROWING
SUCH SEMICONDUCTORS, DEVICES INCLUDING
SUCH SEMICONDUCTORS AND FABRICATING SUCH
DEVICES

Examiner: Sara W. Crane
Art Unit: 2811

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 4th day of October, 2006.

Signature

Angela M. Griffith

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 C.F.R. §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicants request consideration of this Information Disclosure Statement.

Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed more than three months after the filing date of this application and after the mailing date of the first Office Action, but before the mailing date of either a final action under 37 C.F.R. §1.113 or a Notice of Allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in this application.

The IDS processing fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) is enclosed.

Information Cited

The Applicants hereby make of record in the above-identified application the information listed on the attached form PTO-1449 (modified PTO/SB/08). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicants would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>
11/283,631	11/21/05	Charles Lieber, et al.
11/284,350	11/21/05	Charles Lieber, et al.
11/313,096	12/20/05	Charles Lieber, et al.
11/386,080	03/21/06	Charles Lieber, et al.
11/137,784	05/25/05	Charles Lieber, et al.

The above-identified application(s)/patent(s) may include technically-related subject matter and/or claims that are similar to this application. The examiner is requested to review the entire file history of the above identified application(s)/patent(s), including cited references, Office Actions, Responses, etc. The examiner is asked to contact the undersigned if the examiner would like the applicant to supply copies of any or all of the information included in any of the above-listed application(s)/patent(s). If the undersigned is not contacted by the examiner with such a request, then the undersigned will assume that the examiner has reviewed or will review the file content of the above-listed application(s)/patent(s).

Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 (modified PTO/SB/08) be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicants, the Examiner is urged to form his or her own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

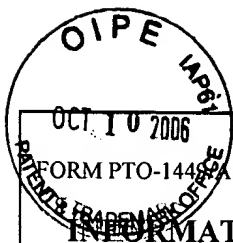
Respectfully submitted,

By:



Timothy J. Oyer, Ph.D., Reg. No. 36,628
Tani Chen, Sc.D., Reg No. 52,728
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
Telephone: (617) 646-8000

Docket No.: H0498.70154US00
Date: October 4, 2006
xNDDx



INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICATION NO.: 09/935,776		ATTY. DOCKET NO.: H0498.70154US00	
				FILING DATE: August 22, 2001		CONFIRMATION NO.: 8935	
				APPLICANT: Lieber, et al.			
				GROUP ART UNIT: 2811		EXAMINER: Sara W. Crane	
Sheet	1	of	4				

U.S. PATENT DOCUMENTS

Examiner's Initials #	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or Issue of Cited Document MM/DD/YYYY
		Number	Kind Code		
		5023139		Birnboim et al.	06/11/1991
		5607876		Biegelsen et al.	03/04/1997
		5824470		Baldeschwieler et al.	10/20/1998
		5908692		Hamers et al.	06/01/1999
		5916642		Chang	06/29/1999
		6187165	B1	Chien et al.	02/13/2001
		6231744	B1	Ying et al.	05/15/2001
		6270074	B1	Rasmussen et al.	08/07/2001
		6278231	B1	Iwasaki et al.	08/21/2001
		6287765	B1	Cubicciotti	09/11/2001
		6340822	B1	Brown et al.	01/22/2002
		6359288	B1	Ying et al.	03/19/2002
		6437329	B1	Yedur et al.	08/20/2002
		6465132	B1	Jin	10/15/2002
		6538367	B1	Choi et al.	03/25/2003
		6559468	B1	Keukes et al.	05/06/2003
		6586095	B2	Wang et al.	07/01/2003
		6628053	B1	Den et al.	09/30/2003
		6741019	B1	Filas et al.	05/25/2004
		6743408	B2	Lieber	06/01/2004
		6756025	B2	Colbert et al.	06/29/2004
		6756795	B2	Hunt et al.	06/29/2004
		6762056	B2	Imamiya	07/06/2004
		6803840	B2	Hunt et al.	10/12/2004
		6808746	B1	Dai et al.	10/26/2004
		6815706	B2	Li et al.	11/09/2004
		6846565	B2	Korgel et al.	01/25/2005
		6882767	B2	Yang et al.	04/19/2005
		6902720	B2	McGimpsey	06/07/2005
		6946197	B2	Yadav et al.	09/20/2005
		6958216	B2	Kelley et al.	10/25/2005
		6962823	B2	Empedocles et al.	11/08/2005
		6974706	B1	Melker et al.	12/13/2005
		6996147	B2	Majumdar et al.	02/07/2006
		2002/0040805	A1	Swager	04/11/2002
		2002/0055239	A1	Tuominen et al.	05/09/2002
		2002/0086335	A1	Massey et al.	07/04/2002
		2002/0158342	A1	Tuominen et al.	10/31/2002

FORM PTO-1449/A and B (Modified)				APPLICATION NO.: 09/935,776		ATTY. DOCKET NO.: H0498.70154US00	
OCT 10 2001				FILING DATE: August 22, 2001		CONFIRMATION NO.: 8935	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICANT: Lieber, et al.			
Sheet 2 of 4				GROUP ART UNIT: 2811		EXAMINER: Sara W. Crane	

	2002/0187504	A1	Reich et al.	12/12/2002
	2003/0001091	A1	Nakayama et al.	01/02/2003
	2003/0003300	A1	Korgel et al.	01/02/2003
	2003/0032892	A1	Erlach et al.	02/13/2003
	2003/0048619	A1	Kaler et al.	03/13/2003
	2003/0073071	A1	Fritz et al.	04/17/2003
	2003/0098488	A1	O'Keeffe et al.	05/29/2003
	2003/0113940	A1	Erlanger et al.	06/19/2003
	2003/0113713	A1	Glezer, et al.	06/19/2003
	2003/0121764	A1	Yang et al.	07/03/2003
	2003/0124717	A1	Awano et al.	07/03/2003
	2003/0134267	A1	Kang et al.	07/17/2003
	2003/0134433	A1	Gabriel et al.	07/17/2003
	2003/0135971	A1	Liberman et al.	07/24/2003
	2003/0189202	A1	Li et al.	10/09/2003
	2003/0197456	A1	Den et al.	10/23/2003
	2004/0067530	A1	Gruner	04/08/2004
	2004/0157414	A1	Gole et al.	08/12/2004
	2005/0037374	A1	Melker et al.	02/17/2005
	2005/0064185	A1	Buretea et al.	03/24/2005
	2005/0064731	A1	Park et al.	03/24/2005
	2005/0066883	A1	Dubrow et al.	03/31/2005
	2005/0072213	A1	Besnard et al.	04/07/2005
	2005/0079533	A1	Samuelson et al.	04/14/2005
	2005/0079659	A1	Duan et al.	04/14/2005
	2005/0100960	A1	Dai et al.	05/12/2005
	2005/0101026	A1	Sailor et al.	05/12/2005
	2005/0181587	A1	Duan et al.	08/18/2005
	2005/0253137	A1	Whang et al.	11/17/2005
	2005/0287717	A1	Heald et al.	12/29/2005
	2006/0008942	A1	Romano et al.	01/12/2006
	2006/0009003	A1	Romano et al.	01/12/2006
	2006/0019472	A1	Pan et al.	01/26/2006

FOREIGN PATENT DOCUMENTS

Examiner's Initials #	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM/DD/YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
		JP	2000-31462	A	Toru et al.	01/26/2000	Abstract
		WO	91/06036	A1	Research Corp. Technologies, Inc.	05/02/1991	
		WO	98/48456	A1	Massachusetts Institute of Technology	10/29/1998	
		WO	99/63347	A2	Jones	12/09/1999	
		WO	02/086480	A1	Stanford University	10/31/2002	

FORM PTO-1449/A and B (Modified)				APPLICATION NO.: 09/935,776		ATTY. DOCKET NO.: H0498.70154US00			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				FILING DATE: August 22, 2001		CONFIRMATION NO.: 8935			
				APPLICANT: Lieber, et al.					
				GROUP ART UNIT: 2811		EXAMINER: Sara W. Crane			
Sheet	3	of	4						

		WO	02/31183	A1	Bioforce Laboratory, Inc.	04/18/2002	
		WO	03/016901	A1	Samsung Electronics Co., Ltd.	02/27/2003	
		WO	03/054931	A1	Virtanen	07/03/2003	
		WO	05/093831	A1	President and Fellows of Harvard College	10/06/2005	
		WO	05/114282	A2	The Regents of the Univ. of California	12/01/2005	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials #	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
		AGARWAL, R. et al., "Lasing in Single Cadmium Sulfide Nanowire Optical Cavities," <i>Nano Letters</i> , 2005, 5(5):917-920	
		CHEN, R.J. et al., "Noncovalent functionalization of carbon nanotubes for highly specific electronic biosensors," <i>PNAS</i> , April 2003, 100(9):4984-4989	
		CHOI, K.J. et al., "Enhancement of Ferroelectricity in Strained BaTiO ₃ Thin Films," <i>Science</i> , Nov. 2004, 306:1005-1009	
		DUAN, X. et al., "Synthesis and optical properties of gallium arsenide nanowires," <i>Applied Physics Letters</i> , Feb. 2000, 76(9):1116-1118	
		FRIEDMAN, R.S. et al., "High-speed integrated nanowire circuits," <i>Nature</i> , April 2005, 434:1085	
		GRADECAK, S. et al., "GaN nanowire lasers with now lasing thresholds," <i>Applied Physics Letters</i> , 2005, 87:173111-1-173111-3	
		HAHM, J. et al., "Direct Ultrasensitive Electrical Detection of DNA and DNA Sequence Variations Using Nanowire Nanosensors," <i>Nano Letters</i> , 2004, 4(1):51-54	
		HEATH, J.R. et al., "A liquid solution synthesis of single crystal germanium quantum wires," <i>Chemical Physics Letters</i> , June 1993, 208(3,4):263-268	
		HIRUMA, K. et al., "GaAs fre-standing quantum-siz wires," <i>J. Appl. Phys.</i> , 1993, 74(5):3162-3171	
		HU, S.Y. et al., "Serpentine Superlattice Nanowire-Array Lasers," <i>IEEE Journal of Quantum Electronics</i> , August 1995, 31(8):1380-1388	
		LAW, M. et al., "Nanoribbon Waveguides for Subwavelength Photonics Integration," <i>Science</i> , August 2004, 305:1269-1273	
		LEFF, D.V. et al., "Thermodynamic Control of Gold Nanocrystal Size: Experiment and Theory," <i>J. Phys. Chem.</i> , 1995, 99:7036-7041	
		LEI, B. et al., "Nanowire transistors with ferroelectric gate dielectrics: Enhanced performance and memory effects," <i>Applied Physics Letters</i> , May 2004, 84(22):4553-4555	
		LIEBER, C., "Nanowire Superlattices," <i>Nano Letters</i> , February 2002, 2(2):81-82	
		MCALPINE, M.C. et al., "High-Performance Nanowire Electronics and Photonics and Nanoscale Patterning on Flexible Plastic Substrates," <i>Proceedings of the IEEE</i> , July 2005, 93(7):1357-1363	
		MENON, V.P. et al., "Fabrication and Evaluation of Nanoelectrode Ensembles," <i>Anal. Chem.</i> , July 1995, 67(13):1920-1928	
		PATOLSKY, F. et al., "Nanowire nanosensors," <i>Materials Today</i> , April 2005, 8:20-28	
		PATOLSKY, F. et al., "Electrical detection of single viruses," <i>PNAS</i> , Sept. 2004, 101(39):14017-14022	
		PAVESI, L., et al., "Optical gain in silicon nanocrystals," <i>Nature</i> , Vol. 408, pp. 440-444 (2000).	
		QI, P. et al., "Toward Large Arrays of Multiplex Functionalized Carbon Nanotube Sensors for Highly Sensitive and Selective Molecular Detection," <i>Nano Letters</i> , 2003, 3(3):347-351	

FORM PTO-1449/A and B (Modified)		APPLICATION NO.: 09/935,776		ATTY. DOCKET NO.: H0498.70154US00	
OCT 10 2005		FILING DATE: August 22, 2001		CONFIRMATION NO.: 8935	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT: Lieber, et al.			
Sheet 4 of 4		GROUP ART UNIT: 2811		EXAMINER: Sara W. Crane	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

	TONG, L. et al., "Subwavelength-diameter silica wires for low-loss optical wave guiding," <i>Nature</i> , Dec. 2003, 426:816-819	
	URBAN, J. et al., "Single-Crystalline Barium Titanate Nanowires," <i>Adv. Mater.</i> , 2003, 15(5):423-426	
	VOSSMEYER, T. et al., "Combinatorial approaches toward patterning nanocrystals," <i>Journal of Applied Physics</i> , 1998, 84(7):3664-3670	
	WANG, W.U., "Label-free detection of small-molecule-protein interactions by using nanowire nanosensors," <i>PNAS</i> , 2005, 102(9):3208-3212	
	WHANG, D. et al., "Large-Scale Hierarchical Organization of Nanowire Arrays for Integrated Nanosystems," <i>Nano Letters</i> , 2003, 3(9):1255-1259	
	WHANG, D. et al., "Nanolithography Using Hierarchically Assembled Nanowire Masks," <i>Nano Letters</i> , 2003, 3(7):951-954	
	WU, Y. et al., "Controlled Growth and Structures of Molecular-Scale Silicon Nanowires," <i>Nano Letters</i> , 2004, 4(3):433-436	
	WU, Y. et al., "Single-Crystal metallic nanowires and metal/semiconductor nanowire heterostructures," <i>Nature</i> , 2004, 430:61-65	
	XIANG, J., et al., "Ge/Si Nanowire Heterostructures as High-Performance Field-Effect Transistors," <i>Nature</i> , 2006, 441, 489-493	
	YANG, P., "Wires on water," <i>Nature</i> , 2003, 425:243-244	
	ZHENG, G. et al., "Synthesis and Fabrication of High-Performance n-Type Silicon Nanowire Transistors," <i>Advanced Materials</i> , 2004, 16(21):1890-1893	
	ZHENG, G. et al., "Multiplexed electrical detection of cancer markers with nanowire sensor arrays," <i>Nature Biotechnology</i> , 2005, 23(10):1294-1301	
	ZHONG, Z. et al., "Synthesis of p-Type Gallium Nitride Nanowires for Electronic and Photonic Nanodevices," <i>Nano Letters</i> , 2003, 3(3):343-346	
	ZHONG, Z. et al., "Coherent Single Charge Transport in Molecular-Scale Silicon Nanowires," <i>Nano Letters</i> , 2005, 5(6):1143-1146	
	Office Action dated 11/29/2005 in U.S.S.N. 10/995,075, filed November 22, 2004	
	Office Action dated 02/23/2006 in U.S.S.N. 10/196,337, filed July 16, 2002	
	Office Action dated 04/07/2006 in U.S.S.N. 10/734,086, filed December 11, 2003	
	International Search Report from Int. Apl. No. PCT/US03/22753, filed July 21, 2003	
	International Search Report from Int. Apl. No. PCT/US2005/004459, filed February 14, 2005	
	International Search Report from Int. Apl. No. PCT/US2005/026759, filed July 28, 2005	
	Written Opinion from Int. Apl. No. PCT/US2005/004459, filed February 14, 2005	
	Written Opinion from Int. Apl. No. PCT/US2005/026759, filed July 28, 2005	
	Written Opinion from Int. Apl. No. PCT/US2005/020974, filed June 15, 2005	
	International Search Report from Int. Apl. No. PCT/US2005/020974, filed June 15, 2005	
EXAMINER:	DATE CONSIDERED:	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. __, filed __, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE – No copies of U.S. patents, published U.S. patent applications, or pending, unpublished patent applications stored in the USPTO's Image File Wrapper (IFW) system, are included. See 37 CFR §1.98 and 1287OG163. Copies of all other patent(s), publication(s), unpublished, pending U.S. patent applications, or other information listed are provided as required by 37 CFR §1.98 unless 1) such copies were provided in an IDS in an earlier application that complies with 37 CFR §1.98, and 2) the earlier application is relied upon for an earlier filing date under 35 U.S.C. §120.]